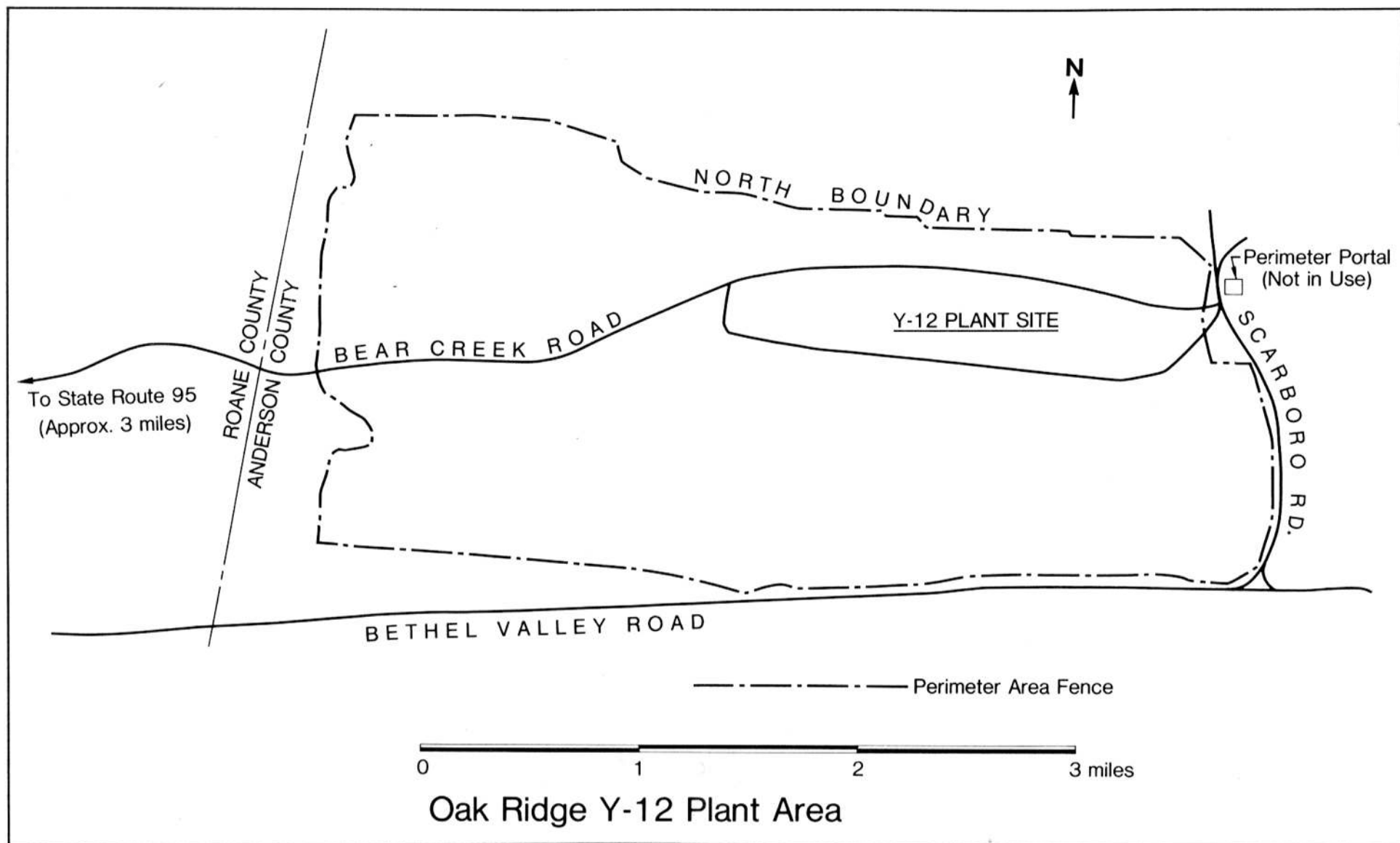


# NUCLEAR DIVISION NEWS

a newspaper for employees of the nuclear division • union carbide corporation

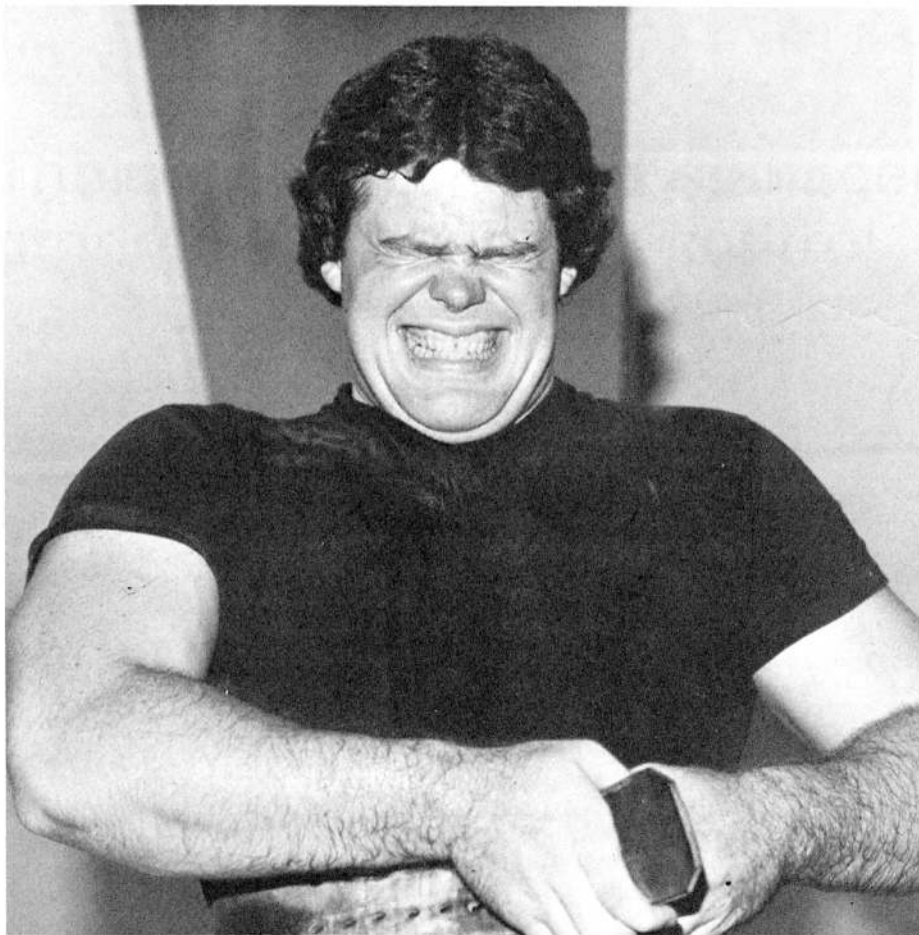


Vol. 10/No. 15 August 9, 1979



## IN NEXT ISSUE:

### ORNL's 'Hulk' Pumps Iron



Terry Collins, ORNL health physics technician, reveals his interest in the sport of powerlifting. Last May, Collins won 1st place in the 220 lb. division at the Chattanooga Open. See his story in the next issue.

## Y-12 perimeter enlarged

The Department of Energy has increased the security perimeter around the Y-12 Plant. While the perimeter buffer is being extended outward on all sides of the plant, it will be generally visible only along Scarboro Road on the extreme east end.

The new fence, consisting of two strands of barbed wire, extends from the top of the hill at the University of Tennessee farm north to the old Guard Portal on Scarboro Road and ties to existing fences to surround the plant.

### Bear Creek closed

Most of Bear Creek Road will be restricted again to "Official Use Only" travel. The road is so restricted to a mile west of the old landfill area on Bear Creek. Nuclear Division officials said that it in no way hampers Union Carbide employees, DOE or DOE-contractor employees. They will continue to use the road as they have in the past.

Y-12 is approximately 2.5 miles long and one-half mile wide. When the fencing project is completed, the east-west dimensional will be approximately four miles, and the east-west dimension will be approximately four miles, and the north-south perimeter will extend about one mile (see map nearby).

Road service, in case of auto breakdowns, flats, etc. will still be

available along Bear Creek in case of emergency from local service station attendants.

### ORGDP, ORNL studies

Studies are under way by DOE officials on the possibility of new perimeter designations for ORGDP and ORNL. No changes in road access are being considered, however, in these studies.

The primary purpose for establishing the buffer zone is to improve protection for Y-12. Residential and commercial developments expanding toward Y-12 have resulted in a need for improved means of notice to the public to avoid unintentional intrusions and to control trespasses.

### UCC increases dividend

The board of directors of Union Carbide Corporation has voted to increase the quarterly dividend to 75¢ a share, payable to stockholders of record on August 3. This will be the company's 249th consecutive dividend and is payable September 1. The new dividend is 5¢ more than that paid June 1.

"It has been our stated intention to raise cash dividends at regular intervals," said William S. Sneath, chairman and chief executive officer, "when we feel the economic outlook for our portfolio of businesses can sustain such an increase."

# Y-12 clericals near end of 13-series instructions

A comprehensive program for clerical workers in the Y-12 Plant, started last January, is nearing completion. The 13-part seminars were coordinated through the Training Department in Employee Relations, and involved the initial enrollment, class scheduling and instructor recruitment. Mary Ayles planned and implemented the sessions of on-the-job training to improve job understanding and performance of the complicated responsibilities of secretaries, clerks, etc.

Herm Snyder, superintendent of Employee Relations, began the series with an overview of Union Carbide Corporation—its history, with particular emphasis on the development, growth and present organization of the Nuclear Division. He also discussed the benefit plans package.

Office management techniques were discussed by Louise Egner, Development Division.

Judy Keeney, Development; and Barbara Oody, Product Certification, led discussions on correspondence, the preparation of reports and various forms used in quantity throughout the plant.

A review of punctuation, grammar, and sentence structure was held by Nancy Vandergriff, Engineering; and Julia Hoppe, General Employee Relations.

## Mailing, Shipping

Mailing and shipping techniques, giving various procedures for the multitude of methods, were discussed by Jeanie Moody, Technical Services; and Jim Cox, Materials and Services.

Timekeeping procedures and payroll policies were discussed by Luther Bridges and Glen Kendrid, both of Timekeeping.

Wil Minter, Materials and Services, discussed records management.

Don Kelso, also from Materials and Services, discussed the forms and practices of the Travel Office.

Don McMurray, Materials and Services; and Ray Fraser, Technical Services, conducted a tour of stores facilities.

## Security control

The handling of classified documents was thoroughly discussed by Martha McKinstry, Engineering Services; and Loyd Sheffield, Security Department.

The Job Opportunity System discussion comprised the eleventh session, as Ayles coordinated discussions from Don Lane, Wage and Salary Administration; George Cobham, Affirmative Action Coordinator for Y-12; and Bill Akers, supervisor of Training. The job bidding system was dissected and discussed at length.

The twelfth session centered on word processing, as Oody, Charles Reeves, Product Certification; Buck Davis, Materials Services; and Doris Shrader, Engineering, demonstrated the latest machines destined to replace multilith machines, and even the typewriter eventually.

## Performance appraisals

The thirteenth, and final session, concerned performance appraisals for the non-exempt employee. It was presented by W. J. Yaggi, general plant services manager; Snyder; William H. Dodson, Development



**UPDATING PROCEDURE**—Information processing, such as updating an organizational chart, can be accomplished in a very short time using this modern equipment. It is demonstrated by Barbara Oody, Physical Testing Department secretary.

Division superintendent; and D. Jeff Bostock, Metal Preparation Division superintendent. The program focused on the appraisal system from the employee's point of view. Suggestions concerning the preparation before the appraisal by the individual employee, the system's

implementation and conducting an equitable and profitable performance review were presented.

The sessions were all well attended and enthusiastic response came from those attending.

Future programs will be announced.



**Mary Ayles**  
Coordinator



**C. L. 'Buck' Davis**



**Doris Shrader**

## INSTRUCTORS



Typical class during a 'break' session



## question box...

If you have questions on company policy, write the editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

### ORNL company sign

**QUESTION:** Why does Maintenance at ORNL allow the hedge at the huge sign at the plant's entrance to grow so high? The line "Operated by Union Carbide Corporation" is covered.

**ANSWER:** Your interest in assuring that ORNL present a neat, attractive image to the public is appreciated. Maintenance of grounds at ORNL fell well behind schedule during the month of July due to excessive rain. We are sure that you are now aware that the hedge in question has been trimmed.

### Morbid safety program

**QUESTION:** You state in the May 3 issue "no other employees have indicated that the program offended them," in reference to the casket, floral arrangements, etc., at the ORGDP safety meeting. I, also, found it outrageous, grotesque, and macabre. I am also wondering how expensive it was to put on?

**ANSWER:** The safety meeting in question was designed by members of the participating department through their own initiative and volition. The cost of preparation of the meeting was in keeping with other similar productions and, hopefully, was far outweighed by positive impact on safety performance. No personal affront was intended, and it is regrettable that it was received in that vein by some.

### 7000 building canteen

**QUESTION:** What are the possibilities of reinstalling a canteen

in the 7000 area at ORNL? It is impossible to catch a shuttle to the cafeteria, then eat and return in 30 minutes.

**ANSWER:** As stated in a previous answer to the question of reopening a canteen in the 7000 Area at ORNL, equipment costs, plus projected operating expense levels, indicate that a canteen facility located in this area is not economically feasible. Since the closing of the canteen in 1970, several improvements have been made to upgrade the lunch room facilities in the 7000 Area. Microwave ovens and refrigerators have been provided in some of these facilities for those who wish to use them with foods brought from home.

## Hunter safety set...

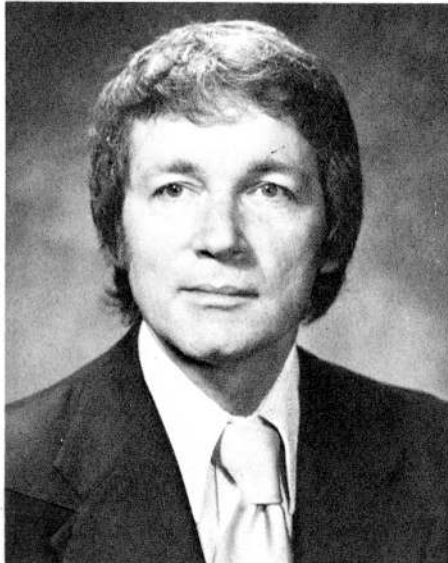
The Tennessee Wildlife Resources Agency's "Hunter Safety Course" will be offered free, beginning August 20 in Oak Ridge. Classes will be held at the Oak Ridge Sportsman's Association club house, at 7 p.m. and will run through August 25. Actual firing will be at the club's small-bore range, Saturday, August 25.

Age limit is past 10 years, and juveniles must have parental consent. However, the course is not entirely for the young, all adults are welcome.

Those completing the course will be given certificates enabling them to participate in managed hunts. More information may be obtained from Ken Moore, extension 4-9133.

## Thoma, ORNL, named manager program analysis and control

Roy E. Thoma has been appointed manager of program analysis and control for the Materials and Structures Technology Management Center at ORNL.



Roy E. Thoma

In this assignment he will be responsible for the center's cost and schedule control, management and technical reporting, coordination of all planning functions, and foreign exchange information.

The newly established national center, with a first-year budget of \$11.3 million, manages tasks related to materials development and high-temperature structural design for DOE's Office of Nuclear Energy Programs.

The research and development is carried out at ORNL and eight other DOE contractor organizations. William O. Harms, director of ORNL's nuclear reactor technology programs, is responsible for the operation of the center and is serving as director on an interim basis.

Thoma has served most recently on the staff of ORNL Executive Director Clyde C. Hopkins. Previously, he was group leader for the Energy Division's Offshore Power Systems Environmental Impact Statement. He

## Davis named quality manager ORGDP Separation Systems

Roger L. Davis, Director of Technical Services at the Oak Ridge Y-12 Plant, has been named Quality Manager for the Separation Systems Division at the Oak Ridge Gaseous Diffusion Plant. Davis is succeeded by David L. Mason, who has been superintendent of the Instrumentation and Characterization Department in Y-12's Development Division.

In his new position, Davis will be responsible for coordinating the quality functions of the gas centrifuge technology group, including inspection and certification, quality control, supplier quality, quality engineering and assurance, and nonconformance handling.

Davis, a native of Lawrence County, Tenn., became associated with the Nuclear Division while a cooperative student at the University of Tennessee. He holds a bachelor's degree in mechanical engineering and a master's degree in business administration, both from the University of Tennessee. He is a licensed professional engineer.

### Led Technical Services

He joined Union Carbide on a full-time basis in 1966 and was assigned to the Product Engineering Department at the Y-12 Plant. In 1971 he was named supervisor of the Standards and Surveys Department, a position he held until his appointment as Director of Technical Services in 1977.

Davis is married to the former Patricia Sumner, and the couple lives in the Gulf Park subdivision, Knoxville. They have two children, Kirk and Paige.

Mason's new responsibilities will include overall supervision of nuclear materials control and accountability, radiation safety, technical information services and equipment inspection.

Mason, a native of Clarksville, received his bachelor's degree in physics from Austin Peay State University, Clarksville, and his PhD from the University of Florida, also in physics.

### Graduate fellow

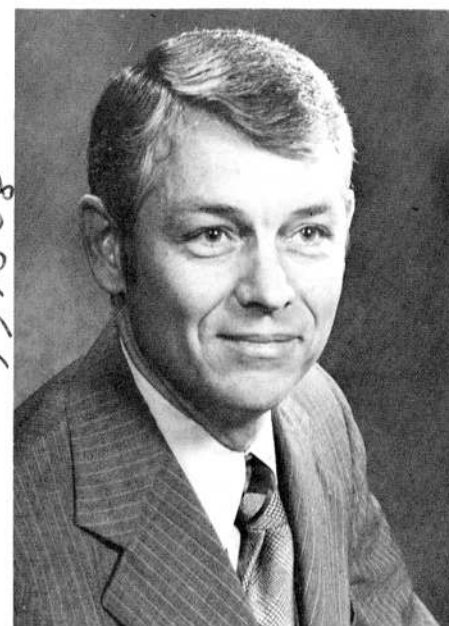
Prior to joining Union Carbide in 1968, he was a graduate fellow with Oak Ridge Associated Universities

also directed the preparation of statements for several other nuclear power plants.

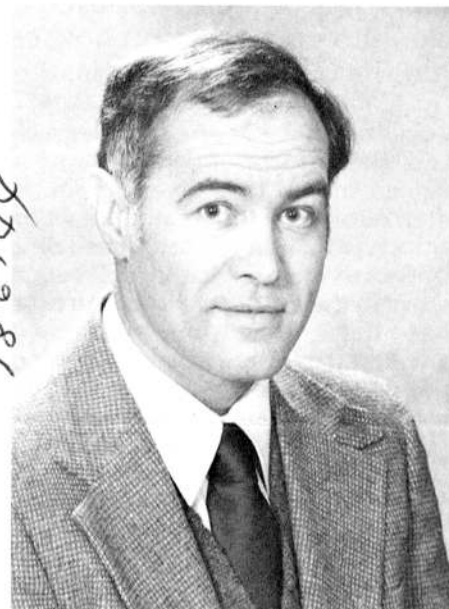
Before joining the ORNL staff in 1952, he was associate professor of chemistry at Sam Houston State College and assistant professor of chemistry at Texas Technological College. He received B.A. and M.A. degrees in inorganic and physical chemistry from the University of Texas and did additional graduate work at the University of Colorado and the University of Tennessee.

Thoma is a member of the American Nuclear Society, the American Chemical Society, Sigma Xi, and is a fellow of both the American Association for the Advancement of Science and the American Ceramic Society.

He and his wife, Nancy, live at 119 Underwood Road, Oak Ridge. They have two sons, Roy, III and Alvin.



Roger L. Davis



David L. Mason

working on a dissertation at Oak Ridge National Laboratory's Isochronous Cyclotron.

He is past president of the Linden Elementary School Parent-Teachers Association, immediate past president of the Atomic City Aquatic Club, and President of the Oak Ridge Boys' Club.

He and his wife, the former Judith Lantrip, live at 139 Windham Road, Oak Ridge. They have two children, Cathy and David.

## NUCLEAR DIVISION NEWS

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NUCLEAR DIVISION  
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Darlene Mazzone, Bell 208



## Energy Advisor. . .

# Adding degree days to the home energy equation

By Dick Raridon  
Computer Sciences Division

*Editor's Note: Recently we began a series of energy conservation features which will be alternated with questions from readers to the "Energy Advisor" on conservation-related topics. The articles will be written by staff members about their own experiences or research, with the Energy Division's Merl Baker (alias the Energy Advisor) coordinating the series. Employees with questions or ideas for articles should contact their Nuclear Division News representative listed on the masthead.*

For anyone who has added insulation or storm windows to his or her home recently, costs of heating and cooling should be less in the future than if nothing had been done. But how much less? The answer depends on a number of factors, not the least of which is the unit cost of energy. You can't simply compare the price you may pay to heat your home next January with what you paid last January. You can't even compare how much energy (kilowatt-hours, for example) you used for the two months. You also have to take into consideration how cold it was during the two months in question.

Coldness is measured in degree-days. The number of degree-days for a given month or a given season is often quoted on the weather news or in the newspaper. It is calculated on a daily basis by taking the difference between the average temperature for that day and some reference temperature. The weather service uses a reference temperature of 65 degrees F, since it is assumed that incident sunlight makes a five-degree contribution to inside temperatures. Thus, if the average temperature for a given day is 55 degrees F, there is a difference of 10 degrees for one day, or (10 x 1) 10 degree-days. Obviously, if you want to maintain a temperature of 70 degrees F inside your home, which is represented by the Weather Bureau's base of 65 degrees F, it will take more energy if the outside temperature averages 45 degrees F than if it averages 55 degrees F. It won't necessarily be twice as much as predicted mathematically, however, since other factors, such as the amount of sunshine, must be considered. If your home is all-electric, consideration also must be given to the amount of electricity used for such functions as lighting, cooking and heating water.

There are also degree-days of cooling during the summer. In this case, 75 degrees F is taken as the reference temperature. An average daily temperature of 65 degrees F would mean 10 degree-days of cooling per day. Any daily average temperature between 65 and 75 degrees F results in 0 degree-days, as calculated by the weather service. Since monthly totals of cooling degree-days are small (50 to 150) compared with heating degree-days (an average of 955 for January), it would be difficult to estimate savings for summer months. The contribution of passive solar energy and internal heat sources, such as ovens, often can make the actual cooling load greater than the cooling degree-days predict.

I decided about two years ago to install additional insulation on our

home, but it was January 1978 before I could find any to buy. At least it wasn't too hot working in the attic then! I had recorded the amount paid for electricity since our home was built 15 years ago, but I didn't begin to record the kilowatt-hours used until about five years ago. With the help of Don Cipriano of the Oak Ridge City Utility Office, I obtained the rates used earlier and thereby reconstructed our electrical usage. Unfortunately, the meter wasn't always read on the first of the month, so I had to redistribute the usage on a monthly basis. In this way, I arrived at the amount of electricity used for 1965 to the present time.

We have a two-level, ranch-style house with 3200 square feet of floor space, all heated (and cooled) by a heat pump. Since our heat pump is an older model, it is not as efficient at

temperatures below 30 degrees F as some newer models, and it cuts off completely at 15 degrees F, switching over to resistance heating. (Since 1968, I have also been keeping a 260-square-foot greenhouse at 55 degrees F during the winter, heated with resistance heating).

Through the office of Searle Swisher of the Atmospheric Turbulence and Diffusion Laboratory, I obtained climatological data for Oak Ridge from 1951 to the present. I found summaries of heating degree-days and converted these to a reference temperature of 68 degrees F, since we used to keep our thermostat closer to 72 degrees F. These statistics are shown in Tables 1 and 2. As you can see, there is considerable variation for a given month. The low for December was 520 degree-days in 1956, while the high was 1157 in 1963. The averages for this time period are listed at the bottom.

Table 2 lists the degree-days for cooling from 1960 to the present. I combined these values to obtain total degree-days. I then plotted a graph of kilowatt-hours vs degree-days. Figure 1 shows this for the period 1973-1977 on a monthly basis.

A certain baseline amount of electricity used is evident, even when the number of degree-days is low. Approximately 2000 kWh per month is used for such purposes as lighting and cooking. Beyond about 400 degree-days, there is a roughly linear relationship as might be expected. Some of the scatter can be accounted for by absences such as vacations. I also plotted yearly totals of kilowatt-hours and degree-days for the period 1965-77.

(Please see page 8)

Table 2. Degree-Days of Cooling (Based on 75° F)  
for the Oak Ridge Area

Year	May	June	July	August	September
1960	5	20	67	90	29
1961	1	16	46	41	44
1962	21	7	62	65	20
1963	5	28	37	53	5
1964	2	78	53	47	12
1965	1	1	46	69	18
1966	0	26	130	49	6
1967	0	35	7	14	0
1968	0	31	95	164	1
1969	1	51	124	17	11
1970	2	16	86	80	52
1971	0	41	39	48	21
1972	0	7	59	45	8
1973	0	18	72	47	35
1974	0	9	36	22	1
1975	7	9	29	58	9
1976	0	5	42	17	0
1977	0	30	98	45	14
1978	0	26	63		

Table 1. Degree-Days of Heating (Based on 68° F) for the Oak Ridge Area

Year	January	February	March	April	May	June	July	August	September	October	November	December
1951	860	683	593	384	128	0	0	0	38	235	782	809
1952	727	690	623	274	75	0	0	1	44	428	687	860
1953	743	697	532	368	38	0	0	0	46	211	648	930
1954	888	608	625	158 <sup>a</sup>	254 <sup>a</sup>	20	0	0	17	302	689	933
1955	948	728	553	215	41	52	0	0	1 <sup>a</sup>	340	700	921
1956	1016	585	543	326	52	40	0	0	52	136 <sup>a</sup>	583	520 <sup>a</sup>
1957	816	522 <sup>a</sup>	584	232	62	0	0	0	31	339	519	766
1958	994	981	710	312	80	1	0	0	47	281	534	968
1959	987	695	718	281	48	4	0	0	2	213	613	820
1960	857	884	988 <sup>a</sup>	278	192	0	0	0	22	227	618	1023
1961	1069	597	493	429 <sup>a</sup>	175	24	5	0	40	318	512	848
1962	984	620	676	422	34 <sup>a</sup>	2	1	0	96	238	652	1038
1963	1135	989	477	270	118	3	4	1	42	179	598	1157 <sup>a</sup>
1964	958	942	630	226	73	9	0	17 <sup>a</sup>	55	396	495 <sup>a</sup>	808
1965	908	808	703	230	34 <sup>a</sup>	13	0	4	36	362	550	819
1966	1077	786	587	331	132	21	0	0	47	381	601	913
1967	847	881	464	205	194	19	11 <sup>a</sup>	3	113	319	706	731
1968	963	1017	589	295	124	0	0	2	39	292	613	971
1969	995	815	821	255	71	16	0	0	61	304	692	969
1970	1181	835	643	246	84	12	0	0	31	208	626	782
1971	963	801	726	311	147	0	0	0	5	141	635	619
1972	841	879	661	311	127	29	6	0	13	329	624	735
1973	941	829	395 <sup>a</sup>	379	193	0	0	0	20	196	505	882
1974	641 <sup>a</sup>	735	439	301	110	60 <sup>a</sup>	0	0	110	421	658	874
1975	829	694	722	393	58	7	0	0	126 <sup>a</sup>	285	580	879
1976	1092	643	552	343	227	17	8	0	99	482 <sup>a</sup>	842 <sup>a</sup>	1029
1977	1335 <sup>a</sup>	872	527	255	92	41	0	1	28	442	534	983
1978	1254	1030 <sup>a</sup>	670	319	165	9	1					
Average	955	777	616	298	112	14	1	1	47	296	622	874

<sup>a</sup>Extremes



## Three promoted at Y-12 Plant

Three inspection supervisors have been named in the Y-12 Plant: George D. Manley and Clarence F. Franklin, Product Certification; and B. B. Stanton Jr., Technical Services.

Franklin, a native of Knoxville, served in the U. S. Army, and joined Y-12 in 1968. He has a BS degree from Cooper's Institute.

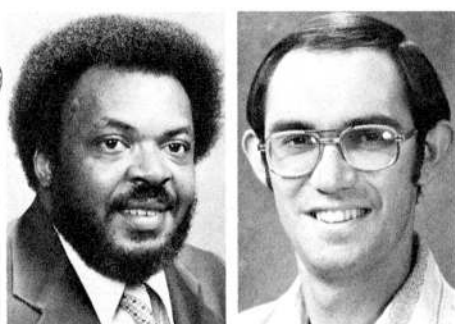
He is married to the former Carissa Franklin, and they live at 1227 Pickett Street, Knoxville.

Manley, a native of Bristol, Va., attended Knoxville Business College. He worked with Square Supply Company before joining Union Carbide in 1967.

Mrs. Manley is the former Jerry Childress. The couple lives at 8205 Mountain Creek Lane, Knoxville, with their daughters, Donna and Dana.

Stanton was born in Brunswick, Ga., and is a graduate of the International Correspondence School, and is certified as a senior engineering technician.

He worked with the Tennessee Valley Authority at Watts Bar Dam Steam Plant, and with the Virginia



Franklin

Manley



Stanton

Public Service before coming to Y-12 in 1944.

He is married to the former Tomasia Bowles, and they live at 520 Patton Ferry Road, Kingston. They have a daughter, Mildred Bracket; and two sons, Ben B. III and William D.

## anniversaries. . .

### Y-12 PLANT

#### 35 YEARS

Carl M. Jones, Special Services; Simon J. Myers Jr., General Shops; Solomon T. Burrell, Buildings, Grounds and Maintenance Shops; Theodore P. Sprague, Development Division; Willie J. Wiggins, Utilities Administration; and Billy J. McNeely, ORNL Chemical Services.

#### 25 YEARS

Harold L. Bell, D. William Hackett, Samuel E. McCoy, Edgar Cooper, Edmond D. Bores, Charles W. Catlett, James B. Fincher Jr., Olin T. McDaniel Jr., Finley West, Ernest L. Reed and Charlie H. Curtis.

#### 20 YEARS

James P. Young, Kenneth M. Cooper, James E. Chance and Marie B. Reich.

### ORNL

#### 35 YEARS

Willie L. Ratledge, Operations, and Edward G. Bohlmann, Chemistry.

#### 30 YEARS

William L. Marshall Jr., Chemistry; John T. Walker, Plant and Equipment; and Edwin T. Loy, Health and Safety Research.

#### 25 YEARS

Phil H. Hayes, Lawton H. Smith, June L. Zachary, Stanley I. Auerbach, Maudean W. Shanks and Obie B. Bridges.

#### 20 YEARS

Fredrick F. Haywood, J. M. Robbins and Elizabeth F. Christian.

### ORGDP

#### 35 YEARS

John H. Reed, Security; Billy B. Ragan, Operations Division; Carl T. Wilson, Maintenance Division; Ben W. Gaylor, Chemical Operations Administration; Constantine C. Hull, Cascade Electrical and Instrument Department; Edward F. Babelay, Separation Systems Division; and James C. Shinpaugh, Barrier Operations.

#### 30 YEARS

Jack C. Bailey, Technical Services.

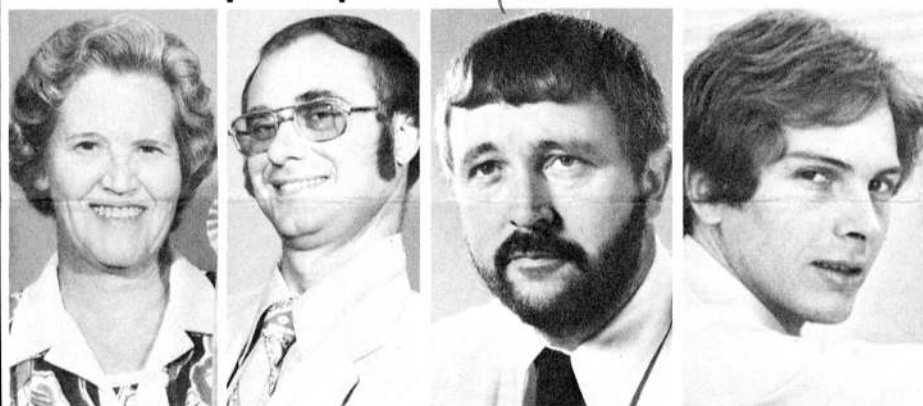
#### 25 YEARS

Henry H. Ridenour Jr., John W. Edwards, Tom L. Lowery, F. S. Stout Jr., Lloyd H. Kahler and Robert F. Hyland.

#### 20 YEARS

Frank M. Clouse, Margaret A. Turner and George D. Rymer.

## about people. . .



Bridges

Dekanich

Goodwin

Strong

**Martha J. Bridges** and **Steven J. Dekanich**, ORGDP Technical Services Division, metallurgical services section, were joint recipients of the Jacquet-Lucas award for their entry in the 1979 International Metallographic Society/American Society for Metals International Metallographic Exhibit. The exhibit was held in Tamiment, Pa., in early July. The award, given for the best entry in the show, consists of the IMS Pierre Jacquet gold medal, the Francis F. Lucas award certificate, \$1,000 in cash and a ribbon. Bridges was the first woman to receive the award and Dekanich was the youngest man to be so honored.

Their winning entry, one of 128 in the exhibit, was entitled: "Corrosion Control in Aluminum-Silicon Brazed Joints through Microstructural Modification." It demonstrated the use of a post-braze heat treatment to nodulize the silicon in an aluminum heat exchanger brazed joint to eliminate silicon leaching in a fluoride gas atmosphere, thus resulting in stable performance of the heat exchanger at its design level. Bridges and Dekanich also submitted another entry, "Analysis of a Fractured Steering Knuckle Bolt," which received an honorable mention in its class.

**Gene M. Goodwin**, of ORNL's Metals and Ceramics Division, has been elected to a three-year term as a director-at-large of the American Welding Society (AWS).

He is a member of the AWS executive committee for the Northeast Tennessee Section and, nationally, a member and past chairman of the Awards Committee. He is also chairman of the AWS Long-Range Task Force and vice-chairman of the Technical Papers Committee. He was the William Sparagen Award recipient in 1974, received a Committee Service Award in 1977 and was co-recipient of the 1979 McKay-Helm Award.

Goodwin, his wife, Linda, and son reside at 245 Iroquois Road, Oak Ridge. Goodwin, leader of the welding and brazing group, joined the Laboratory as a research staff member in 1968 after receiving a PhD from Rensselaer Polytechnic Institute.

**Paul M. Strong**, an electrical engineer at the Paducah Plant, has been elected chairman of the Paducah sub-section of the Institute of Electrical and Electronic Engineers for 1979-80. He joined Union Carbide in early 1977, after receiving his BS degree from Michigan Technological University. Tom Lanham, also at Paducah, serves as treasurer of the sub-section.

## Corporate world of Union Carbide...

SECOND QUARTER SALES were up substantially for Union Carbide Corporation. Earnings for the 1979 second quarter were \$150.5 million, compared to prior-year second quarter earnings of \$10.8 million. Per share earnings were \$2.30, compared with \$1.65 for the same period last year.

"While earnings increased by 41 percent in the second quarter, compared to the prior year's quarter," William S. Sneath, Union Carbide chairman and chief executive officer, "they are

equivalent only to 6.6 cents earnings per dollar of sales, a level of return that is still below management expectations."

All the company's industry segments participated in the sales gains, Sneath pointed out. He added, however, that the company anticipates some slowdown in general economic activity in the third quarter and even further slowdown in the fourth quarter.

Domestic sales increased 19 percent; while international sales increased eight percent.

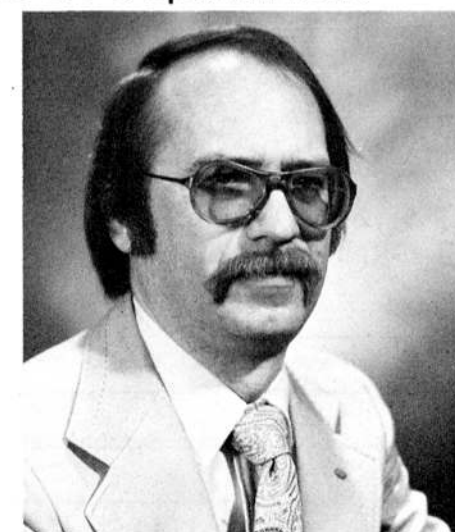
## Named head of Paducah department

T. Mike Jennings has been named head of the Paducah Plant's Quality Evaluation Department. He has been a machine design engineer, converter technology keyman and assistant superintendent of Metallurgical and Engineering and Inspection.

Jennings received a BS degree in engineering from Southern Illinois University. He is a veteran of the U. S. Army and was formerly employed by Rochester-Goodell Consulting, Salem, Ill. He joined Union Carbide in 1965.

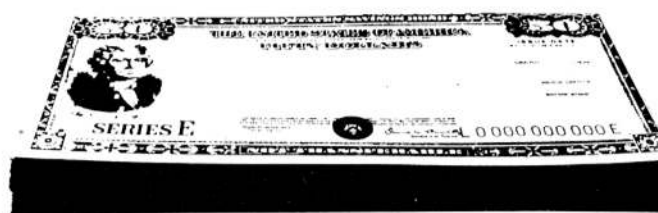
A certified professional engineer, Jennings is a member of the American Society for Nondestructive Testing.

He and his wife, Elizabeth, live on Olivet Church Road with their daughters, Christina and Sherry.



T. Mike Jennings

## Join the Payroll Savings Plan.



The sooner you start, the more you'll have.



## recreationotes. . .

### Golf tournaments. . .

#### Y-12. . .

Dick Spurling and Charlie Ferguson tied to take Y-12 honors in the July greens race at Chestuee Golf Course, each carding a 77. Jim George finished second with 81. In handicap scoring it was C. T. Haun, 77; and Jim Vance with an 80.

In division two, it was Bo Glover with an 88; Danny Boyd, 89. Handicap lows were tallied by C. E. Searcy, 91; and J. P. Woodall, 97.

In division three it was Leonard Nance with 92, Avery Kendig, 95. Handicap laurels went to Billy Carter, 96; and Ralph Owenby, 101.

Winners may pick up golf balls at the Recreation Office, Building 9711-5.

#### Paducah. . .

Blair Miller captured Paducah's 1979 Carbide Open with a 77 at the Village Green on Kentucky Lake. Van Bryant followed closely with a 78 for second place and Jim Lawson placed third in the competition with an 82. Succeeding winners in the championship flight, Jake Piercy, David Martindale and Ray Eby, shared scores of 83.

Bruce Kersey accepted the championship trophy in the second flight with an 85 and Norma Smith claimed the third flight championship with a 92. Robert Peeler shot a winning 102 for the fourth flight winnings and Gail Giltner picked up the fifth flight trophy shooting 111. Doug Williams drove the longest ball on hole #11 to win the day's "Nearest the Pin" contest.

#### ORNL. . .

Henry Tuck zeroed in on the Dead Horse Lake tournament for ORNers, scoring a 78. J. W. Jackson and P. Pair took the second seat with 81 each. Handicap lows went to J. Johnson, 85; and G. Case, 86.

In flight two it was H. Harshaw, 79; and G. Holt, 87; with handicap lows going to G. George, 84; and F. Schmollinger, 91.

In flight three it was D. Underwood scoring low, with 93; and J. Lanford and R. Livesey tying with 96. Handicap lows were gleaned by J. Womack, 98; and E. Westmoreland, 97.

Golf balls are available for the winners from Debbie Walker, Room J-108, Building 4500N.

#### ORGDP. . .

Waldo Golliher one-under-parred the course at Bays Mountain to win the ORGDP scramble, as Alvin Boatwright's par was second. J. D. Kirkpatrick and J. L. Gamble were handicap winners, each with a score of 76.

Flight two went to Russ Langley, 83; and J. F. Monney, 84. K. W. Keever's 84 was handicap low; with J. D. Worth edging into second place with 86.

In the last division it was H. E. Aguirre, 89; and C. H. McIntyre, 90.

Randy Musick's 90 was handicap low, with S. A. Spector's 94 in second place.

Winners may pick up their bounty from Peggy Collier, Room C-136, Building K-1001.

## ORGDP divisions enjoy picnic



An early summer picnic brought out the forces of the Employee Relations and Finance, Materials and Services Divisions at ORGDP. Clark Center Recreation Park was the scene of food, drink and games in abundance. ER men and women were victorious in the softball competition. The real winners, however, from the scenes photographed, were the children of the employees.

## Tee-Off Time Application for August 25, 1979

- ☐ ORGDP—DEAD HORSE LAKE  
☐ Y-12—WALLACE HILLS  
☐ ORNL—WHITTLE SPRINGS

**Foursome will Ride**  
 Yes ☐ No ☐

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_ **LEADER**

PHONE \_\_\_\_\_

BLDG. \_\_\_\_\_

TEE-TIME \_\_\_\_\_

Foursomes that ride carts will receive earlier time  
 COMPLETE AND RETURN TO THE Y-12 RECREATION OFFICE  
 BUILDING 9711-5, MS-001

Entries must be received prior to drawing in August 22, 1979.

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Golfers are responsible for reserving their own carts by contacting the pro shop following drawing for tee-off times. The leader ONLY for each foursome should call the Recreation Office, 4-1597, after 3 p.m., Wednesday for your time.

### wanted. . .

#### ORNL

JOIN or FORM CAR POOL from East Village, Oak Ridge, to any portal, either shift. Wilma Stair, plant phone 4-4772, home phone 483-3114.

CAR POOL MEMBERS from Lakeshore Drive or downtown area, Kingston, to East Portal, 8-4:45. Martin Skinner, plant phone 4-4178, home phone 376-6894.

RIDERS for VAN POOL from West Knoxville to any portal, 8-4:30. W. L. Pattison, plant phone 4-6888, home phone 691-0781.

#### Y-12 PLANT

Wanted CAR POOL MEMBERS from Harriman to any portal, 7:30 a.m. to 4 p.m. Wendell Jones, plant extension 4-3802, home phone 882-2113.

VAN POOL RIDER from Maryville to Central, North or East Portal, 8-4:30. Darell Coppenger, plant phone 4-1380, home phone 983-5939.

#### ORGDP

Ride wanted from Ball Road, Knox County to Portal 5, "D" shift. Contact Jack McKinney; home - 690-1888, plant - 4-1301.





### Medicine Chest...

## Toilet seat and gonorrhea

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 21, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

**QUESTION:** "While still in Oak Ridge, several people expressed concern to me about transmission of infections, especially gonorrhea, on toilet seats. Now that a scientific study on this subject has been published, this question can be addressed but, unfortunately, only equivocally answered.

**ANSWER:** James H. Gilbaugh Jr., MD, and Peter C. Fuchs, PhD from the St. Vincents Hospital and Medical Center in Portland, Oregon, published their study, "The Gonococcus and the Toilet Seat" in the prestigious *New England Journal of Medicine*, July 12, 1979.

These doctors said that, to their knowledge, genital gonorrhea infection in adults had never been acquired by non-sexual means. It had been claimed by several patients, but they probably were unwilling to give a complete exposure history. Ascribing an embarrassing infection to a toilet seat in a public rest room is probably a skillful dodge because who could prove otherwise? Besides, it could theoretically happen - couldn't it?

These two scientists randomly cultured 72 toilet seats in men's and women's rest rooms in several public rest rooms. They included several hotels, department stores, depots, hospitals, clinics and a high school.

#### Tests performed

In addition, Drs. Gilbaugh and Fuchs spread suspensions of *N. gonorrhoeae*, the gonococcus, the organism which causes gonorrhea, on previously sanitized toilet seats. They then cultured the seats immediately and at 10 minute intervals for 4 hours. Also, pooled urethral discharge from men with an active infection were diluted with an equal volume of a physiological saline

solution and spread on a clean toilet seat.

The gonococcus could only be cultured from the toilet seats immediately after it was applied. Ten minutes later and all subsequent cultures were negative except on the one that had been contaminated by pooled urethral discharges from male patients. Then the gonococcus could be cultured for up to two hours. A wide selection of common skin bacteria were also cultured but none were of any special significance.

Apparently, the gonorrhea bacteria can survive drying longer than suspected when they are contained in purulent urethral discharge material. The authors commented, "The mechanism of this protection is not clear, but it could involve either the intracellular residence of the gonococci or unknown extracellular factors in pus. . . but this finding alone is not sufficient to explain acquisition of gonorrhea from toilet seats. A means of transmission from the seat to the urethral or genital tract must be demonstrated. Mere sitting on a contaminated seat is not sufficient."

The answer, I'm afraid, is yes, it is theoretically possible to acquire gonorrhea from a toilet seat but the likelihood is so small and the mechanism so hard to imagine, it can probably safely be discounted.

**NOTE:** My lack of contact with patients in my administrative position in New York has reduced my source of inspiration! Your ideas for articles would be greatly appreciated. Please suggest general subjects or specific questions. My answering questions on personal medical problems is difficult because insufficient information is usually given. Please send your ideas to Jim Young, News Editor, who will forward them to me.

## safety scoreboard

Time worked without a lost-time accident through August 2:

Y-12 Plant .....	119 Days	3,851,000 Employee-Hours
ORGDP .....	233 Days	7,458,150 Employee-Hours
ORNL .....	131 Days	3,015,718 Employee-Hours
Paducah .....	70 Days	836,000 Employee-Hours

## Enjoying the leisure life...



### At the top of the country

Many Nuclear Division retirees have travelled over the face of the globe by bus, car, tramp steamers, airliners, etc.

But it's doubtful that anyone can beat Lester D. Blakeney's recent record! He and his wife hit the southern tip of the United States last February, at Key West, Fla. On June 20. . . some 13,500 miles later, they stood at the nation's northernmost tip, Circle City, Alaska.

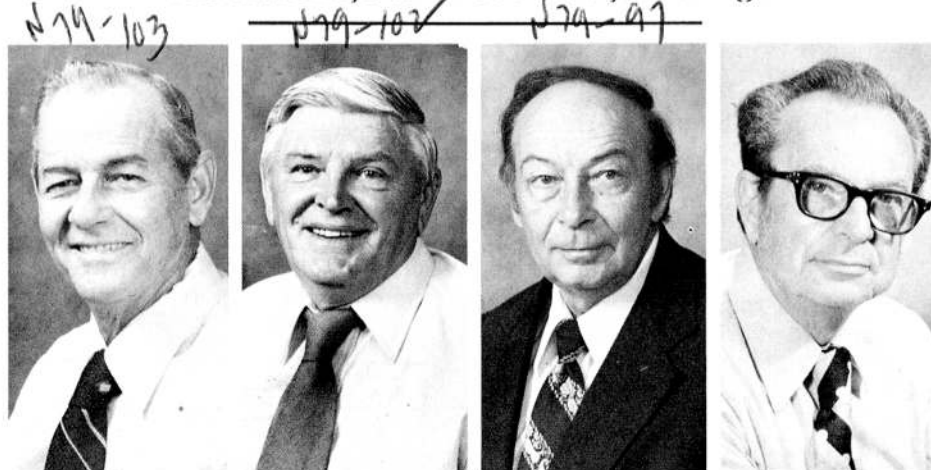
Blakeney, who retired from ORGDP's Operations Division in 1976, after 29 years of service, now lives in Millport, Ala., but not for long. It's back on the road again.

The biggest thrill of it all, he writes, was seeing the midnight sun, and the added pleasure of seeing the wondrous sights in this big country.

To anyone contemplating early retirement, "Come on in, the water's fine," Blakeney says, "but watch those waters around Circle City!"



### The Blakeney's as far south as you can go!



**James T. Gent**  
Beta 2 Expansion  
Y-12  
24 years service

**Freeman O. Fox**  
9215 Rolling Mill  
Y-12  
21 years service

**John D. Hatmaker**  
Process Maintenance  
Y-12  
35 years service

**Charles R. Raper**  
Engineering  
Paducah  
7 years service

# The energy advisor. . .

(Continued from page 4)

Figure 2 shows that adding a greenhouse increased our annual electrical usage about 7000 kWh above that during 1965-68. Starting in 1974, with the energy crisis, I cut the thermostats back in the house, greenhouse and water heater. We also made a conscious effort to use fewer lights. As a result, our annual usage dropped about 4000 kWh. An additional drop is anticipated due to added insulation when I plot similar data for the next few years. At least the slope of the straight line should decrease. A quick calculation for January 1979 indicated a savings of at

least 900 kWh over the two previous Januaries.

It is interesting, and somewhat sobering, to see how the price of electricity has changed in the past 14 years, by about a factor of four. Our total electric bill for 1965 was \$220. Recently we had a bill for \$180 for one month. If you heat with gas or oil, the price has also increased. For either of these fuels, curves similar to the ones for electricity had be plotted. Simply substitute cubic feet of gas or gallons of oil for kilowatt-hours. Let's all work to lower our slopes!

## division deaths. . .

**Edward Coleman Brantley**, a senior laboratory technician in ORNL's Chemical Technology Division, died July 27 at the Oak Ridge Hospital. He was a native of Union County, but lived most of his life in Knoxville. He worked at the Laboratory for 27 years.

Survivors include his wife, Irene; a son, Allen; and daughters, Karen and Teresa.

Services were held at McCarty's Mortuary with burial in Lynnhurst Cemetery.

**Ted C. Leffew**, Y-12 Stores Department, died July 21 in a Knoxville hospital. A native of Kingston, he served in the U. S. Air Force before joining Union Carbide in 1968. Mr. Leffew officiated at TSSAA football games throughout the area and was a baseball coach with the Kingston Optimist Club.

Survivors include his son, Scott; a daughter, Karen; his mother, Jesse Holland Leffew; a sister, Linda; and brothers, George, Roy, Wallace, Billy, Curtis, Hal, David and Ronald.

Funeral services were held at the Kyker Funeral Home with burial in the Lawnville Cemetery.

**Esther M. Moody**, Y-12's Product Engineering and Scheduling Division, died July 24 at the Oak Ridge Hospital. A native of Sweetwater, she attended Hiwassee Junior College and taught school in Monroe County before coming to Y-12 in 1943.

Survivors include her sisters, Mary Shelton and Ethel Cutcher.

Funeral services were held at Weatherford's Chapel, with burial in Roberson Cemetery, Loudon.

The family has requested that memorials be in the form of contributions to the Holston Methodist Home, Greeneville, or to the American Cancer Society.

**Elijah F. Harness**, ORNL's Plant and Equipment Division, died July 30 at the Oak Ridge Hospital. He had worked at the Laboratory for the past 29 years.

He was a member of the Crystal Lodge #616 of Briceville, the Order of the Eastern Star in Oak Ridge, and was a member of the Laurel Grove Baptist Church of Briceville.

Survivors include his wife, Renee, son, Raymond, and a daughter, Margaret.

Services were held at the Laurel Grove Baptist Church.



Mr. Brantley



Mr. Harness



Mr. Leffew



Miss Moody



Mr. Washington

**Bobby J. Washington**, Finance, Materials and Services Division at ORGDP, died July 18 at a Knoxville hospital. He joined Union Carbide in 1975 after working as a technician at the Oak Ridge Hospital.

A native of Cincinnati, he moved to the Oak Ridge area as a small child.

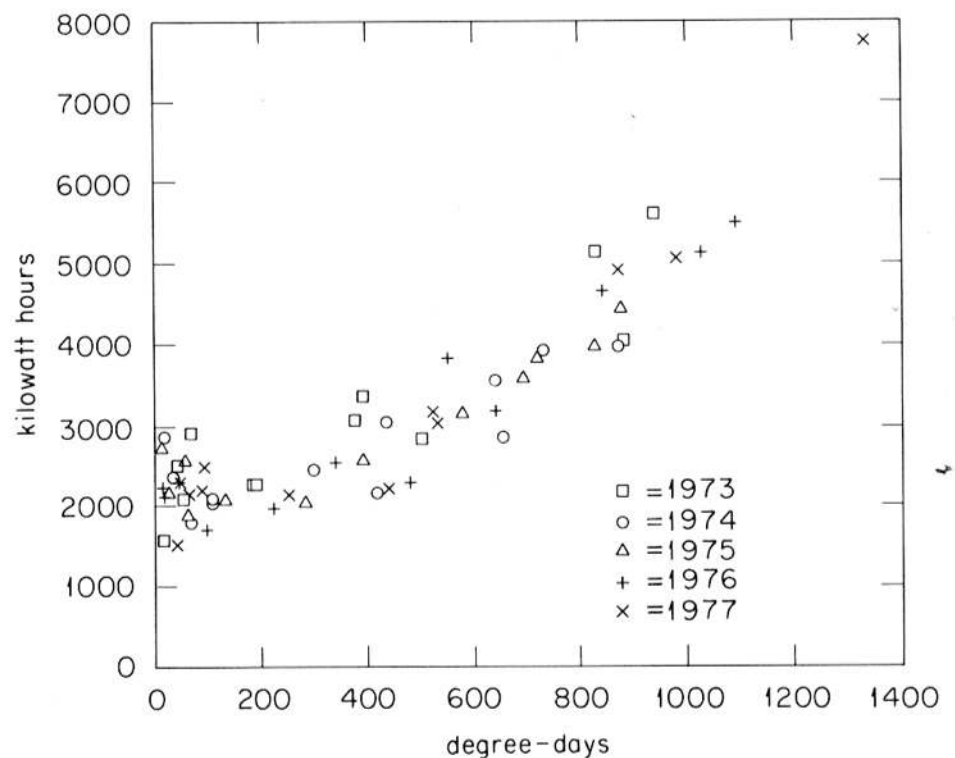
Mr. Washington is survived by his wife, Christine Turner Washington, in the Plant Protection and Security Division at ORNL. He is also survived by daughters, Annette, Jeanette, Bobbie, Kristie, Cynthia and Sylvia Washington; his mother, Juanita Harris; and his stepfather, J. R. Harris, an employee at the Y-12 Plant; sisters, Mary Ann Pruitt, Donna Lee Pruitt and Beulah Mae Harris; brothers, Charles, Babe, William, Rod and Baby Boy.

Services were held at the Mount Sinai Baptist Church, with burial in the church cemetery.

## Next issue. . .

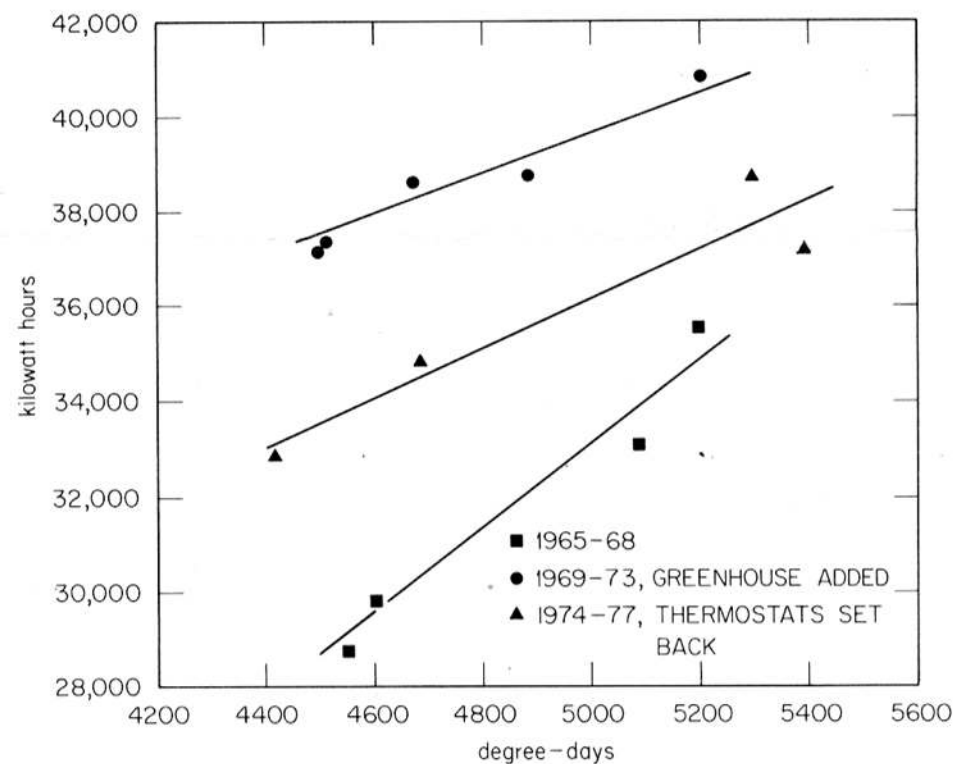
The next issue will be dated August 23. The deadline is August 15.

Figure 1



A comparison of the last five winters in terms of electricity use is in the top graph, while below, the slope angle is the critical feature; it shows how significantly the addition of insulation reduces the increase in power consumption.

Figure 2



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